

Culpepper and Weinberg, in further view of Toyoda et al, U.S. Patent No. 5,260,792. Claims 3-5, and 9-11, stand rejected under 35USC103(a) based on the references Culpepper and Weinberg, in further view of Jagger et al, U.S. Patent No., 6,807,405. Claims 6 and 12 stand rejected under 35USC103(a) based on the references Culpepper and Weinberg, in further view of reference Cai, et al, U.S. Patent No. 5,267,272. The Examiner is respectfully requested to reconsider his rejection in view of the above amendments and the following remarks.

Discussion of the Cited Reference

The Examiner relies on the reference Culpepper as primary support for the rejection based on obviousness. The reference Culpepper describes a system for tracking a radio beacon installed on a vehicle or article. The device is used to locate stolen property by law enforcement agencies. Its primary purpose is to identify and lock onto the signal transmitted by the radio beacon. The system of the subject invention involves detecting and characterizing burst or continuous wave jamming interference. This is a substantial difference in function and results in the use of significantly different components. The Examiner relies on the DSP circuit 80, as shown in figure 9 of the reference Culpepper and characterizes DSP 80 as follows:

"...Culpepper et al discloses a beacon signal receiving system for tracking portable transmitters as well as eliminating interference comprising a spectrum analyzer (fig 9, label 154), a burst clamp or limiter coupled to the spectrum analyzer (fig. 9, labels 152 and 154) for clamping a signal at a predetermined level (Col. 15, lines 15-17), an automatic gain control (AGC) coupled to the input of the burst clamp or limiter (fig. 9, labels 151, and 152) and coupled to the output of the burst clamp (fig. 9, labels 151, 152) through a feedback loop (Fig. 9, label TUNE)"

There is no support for the Examiner's statement "as well as eliminating interference" this is an assumption by the Examiner based on the fact that any receiver will to some extent seek to reduce interference. There is little or no discussion relating to interference anywhere in the cited reference, but in particular with respect to the function of DSP80.

It should be noted that one of the purposes of the system of this invention is to eliminate the need to use complex digital signal processors, such as DSP80. Nevertheless DSP80 does not provide the function of the system of this application. DSP80 is described in column 5, lines 37-45, as follows:

"The DSP 80 is composed of hardware which implements a computer optimized for signal processing functions; and a firmware program run on the former, which implements the specific signal processing algorithms. The hardware is further segregated so that many of the secondary functions (serial communications, status reporting, etc.) are assumed by a microcontroller 100; thus freeing the DSP 80 for signal processing functions. The DSP is discussed in greater detail in reference with FIG. 9."

and again at lines 56-65:

The firmware in the DSP 80 utilizes a Fast Fourier Transform (FFT) algorithm to provide speedy signal acquisition, and implements a tuneable narrow bandpass filter function to achieve improved RF selectivity and sensitivity. A phase-locked loop (PLL) demodulates relative direction information, and amplitude modulated signal validation information is recovered from either an audio tone filter/detector or from a correlator filter. As discussed, antenna commutation is also controlled by the DSP 80."

The FFT 154 of Culpepper, therefore, does not perform a spectrum analysis function as depicted by the Examiner. There is no spectrum analyzer that is used to characterize interference in the reference Culpepper.

AGT 151 and limiter 152 are described at column 15, lines 10-17 as follows:

"The signal is then adjusted in level by the AGC 151 if the signal level is too low to account for the noise bandwidth reduction of 8-to-1 kHz. AGC 151 is not active during normal operation, resulting in decreased circuit noise. AGC 151, when active, allows the gain of the digital PLL to remain constant at low signal-to-noise ratios. The signal is then limited by limiter 152 and applied to the FFT processor 154 and the digital PLL 153."

The combined functions of the AGC 154 and limiter 152 bears no relation to the burst clamp and AGC feed back loop of the subject invention.

The tuning loop TUNE does not constitute a feed back loop, as described in the claims of this application. There is no such feed back loop in the DSP80. It simply cannot perform such a function considering that FFT 154 is connected in loop TUNE.

It is clear from the above that the system of Culpepper cannot operate to provide the functions of the subject invention. The cited reference Culpepper does not teach all that the Examiner has attributed to it.

Examiner relies on the combined teachings of the references Culpepper and Weinberg to support all of the rejections based on obviousness. The Examiner characterizes the reference Weinberg as follows:

"Although Culpepper et al does not disclose a computer coupled to the output of the spectrum analyzer, Weinberg et al discloses an AGC coupled to a spectrum analyzer coupled to a computer....,"

The cited reference Weinberg introduces its system with the following statement, at column 1, lines 61 to column 2, line 2 :

"Unlike the spectrum analyzer, the system of this invention processes data containing amplitude, phase, and frequency information that has been coherently extracted from a desired signal's demodulated data. The invention takes advantage of this information and thus, is many orders of magnitude more sensitive than a spectrum analyzer in assessing the content of received signals."

Clearly there is no spectrum analyzer disclosed in the cited reference Weinberg and this reference teaches away from the use of such devices.

The Issue of Obviousness

It is well settled that in order to establish a prima facie case for obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of

success must both be found in the prior art, without reference to the disclosure of this application.

Applicant submits that the above described deficiencies of the primary reference Culpepper are not remedied by the proposed combination with the teaching of the reference Weinberg. The combined references do not, therefore, support a prima-facie case of obviousness. The modification of the teachings of Culpepper or Weinberg, in order to obtain the invention, as described in the claims submitted herein, would not have been obvious to one skilled in the art. This also applies to the teachings of the other references, Toyoda, Jagger, and Cai. None of these references remedy the deficiencies described above with regard to the combined references Culpepper and Weinberg.

The Examiner continues to dismantle the claims and pursued a search for the individual features. It is well settled that "the actual determination of the issue requires an evaluation in the light of the findings in those inquiries of the obviousness of the claimed invention as whole, not merely the differences between the claimed invention and the prior art." (Graham v. John Deere Co., 383U.S.17). The court admonishes in In re Fritch, 972F.2d1260 as follow:

"It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that "one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."

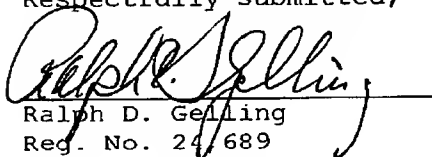
The above arguments apply equally to the rejected dependent claims.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the

Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for the extension of time required and any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,


Ralph D. Gelling
Reg. No. 24689

Dec. 8, 2005
Date

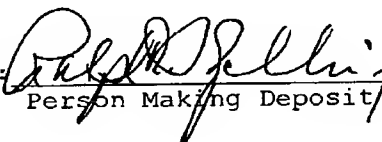
Perman & Green, LLP
425 Post Road
Fairfield, CT 06824
(203) 259-1800
Customer No.: 2512

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